



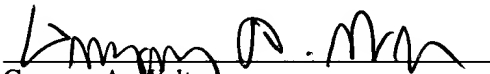
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assignee's Docket No.: 13-DV-13856)
)
Group Art Unit: 2132)
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Serial No.: 09/931,348)
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Examiner: Grigory Gurshman)
)
Filing Date: August 16, 2001)
)
Title: Paperless Records in)
Aircraft Maintenance)
)
)

CERTIFICATE OF MAILING

I certify that this document is addressed to Mail Stop Non-Fee Amendment, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450, and will be deposited with the U.S. Postal Service, first class postage prepaid, on November 29, 2004.


Gregory A. Welte

REQUEST FOR RECONSIDERATION

Honorable Commissioner of Patents and Trademarks
Washington, DC 20232

Sir:

This Request is submitted in response to the Office Action mailed on September 29, 2004. Claims 1 - 17 are pending, and all stand rejected at present.

RESPONSE TO REJECTION OF CLAIMS 6 - 11

Claims 6 - 11 were rejected on grounds of anticipation, based on Hoffman.

Claim 6

Claim 6 recites:

6. A method of documenting an operation performed upon an aircraft by a party, comprising:

- a) accepting information from the party, and generating a digital document containing the information;
- b) applying an algorithm to the digital document, and producing an output; and
- c) encrypting the output into cypher text, using an encryption key in possession of the party.

Point 1: Claim Elements Missing from Reference

Applicant points out that claim 6(a) recites "accepting information from **THE** party." Under the claim, "the party" is the "party" who "performed" "an operation . . . upon an aircraft."

No such "party" has been identified in Hoffman. Nor has acceptance of "information" from that "party" been identified in Hoffman.

Claim 6 also recites "generating a digital document containing the information." No such "digital document" has been identified in Hoffman.

Claim 6 also recites "an encryption key in possession of the party." No such "encryption key" has been identified in Hoffman.

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MPEP § 2131 states:

A claim is anticipated only **if each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Since the elements just described have not been shown in Hoffman, Applicant submits that the rejection cannot stand.

In addition, since the claim recitations just discussed have not been identified in Hoffman, and since the undersigned attorney cannot locate these recitations in Hoffman, Applicant requests, under 37 CFR §§ 1.104(c)(2) and 35 U.S.C. § 132, that the PTO specifically identify these five elements in Hoffman:

- 1) the claimed "party,"
- 2) the claimed "aircraft,"
- 3) the claimed "information,"
- 4) the claimed "digital document," and
- 5) the claimed "encryption key."

Point 2: Regulations Require Identification of Claim Elements

Applicant points out that 37 CFR § 1.104 states:

Nature of examination.

. . .

(2) In rejecting claims for want of novelty . . . , the examiner must cite the best references at his or her command.

When a reference is complex or shows or describes inventions other than that claimed by the applicant, **the particular part relied on must be designated as nearly as practicable.**

Point 3: Additional Claim Elements Missing from Reference

In addition, Applicant points out that the "output" of claim 6(b) is traceable to the "information" which is obtained from the "party" who performed the "operation" on the "aircraft." One reason for the traceability is that the claimed "algorithm" is applied to the "digital document," and under claim 6(a), the "digital document" contains the "information" which is obtained from the "party."

Applicant thus requests that the claimed "output" of claim 6(b) be identified in Hoffman.

Applicant further requests that the claimed "cypher text" of claim 6(c) be identified in Hoffman.

PTO's Assertion is Incorrect

The Office Action, page 2, section 4, asserts that certain claim recitations are found in Hoffman's Figure 2. However, the quoted matter in that section 4 does not correspond to the claim language. (For example, the claim states that the "encryption key" is "in possession of the party." The "party" performed the

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"operation" on the "aircraft," and also delivered the "information." The Office Action fails to assert that all these elements are present in Hoffman's Figure 2.)

Therefore, even if the Office Action's assertion is correct, it fails to show claim 6. Hoffman's Figure 2 may show something, but it is required to show claim 6.

Claim 7

Claim 7 recites:

7. Method according to claim 6, in which the party signs no paper document corresponding to the digital document.

The Office Action, page 3, asserts that no paper document is signed in Hoffman.

Point 1

Applicant points out that, for this assertion to be relevant, the PTO must show that the claimed "party" is present in Hoffman, and does not sign as claimed. That has not been done. Thus, the PTO's assertion does not show claim 7.

Point 2

It appears that the PTO's assertion of absence of signing in Hoffman is incorrect.

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Applicant points out that Hoffman, column 2, line 48, refers to "an improved signature area." Plainly, something is signed.

Also, Hoffman's Figure 20A refers to an electronic signature request packet.

Also, Hoffman, column 25, lines 53 - 55, refers to computers which perform electronic signatures. If a person in Hoffman were operating one of those computers, then that person could be interpreted as signing a document.

Consistent with this, Hoffman, column 27, line 58 et seq. states that customers can "construct" an "electronic signature." "Constructing" an "electronic signature" would seem to amount to signing a document.

And Hoffman, column 32, line 26 et seq. states that "individuals . . . sign electronic documents."

Hoffman, column 39, line 48 et seq. states that a bank uses an ordinary "signature card." A customer signs a "signature card." That is contrary to the PTO's assertion that nothing is signed in Hoffman.

Further, it is reasonable to assume that the signature card in Hoffman is used: some person signs something in Hoffman, and that signature is compared with the signature on the card. This reasonable assumption is contrary to the PTO's assertion.

In addition, one legal definition of "signature" is "any mark created by a person with the intent that the mark act as a

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signature." In Hoffman, the "digital signatures" which he uses are actually codes. Thus, for the PTO's assertion to be persuasive, the PTO must show that no person in Hoffman affixes such a code to a paper document corresponding to the claimed "paper document."

Applicant submits that the PTO's assertion is incorrect.

Claim 8

Applicant points out that claim 8 states that the "digital document" is transmitted to the "storage location." Parent claim 6 does not state that the digital document is encrypted.

No non-encrypted digital document, transmitted to a storage location, has been shown in Hoffman.

Claim 9

The comparison step of claim 9(g) has not been shown in Hoffman. Applicant requests that this step be identified in Hoffman.

Claim 10

Claim 10 states that items of information are extracted from the digital document, and inserted into a searchable database.

The Office Action asserts that Hoffman stores information into a searchable database.

That is insufficient to show claim 10. Extraction of the

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items from the digital document and inserting **those items** into the database must be shown in Hoffman.

Claim 11

The elements of claim 11 have not been shown in the prior art, nor even asserted to be present in the prior art. Thus, no rejection of claim has actually been made. Consequently, claim 11 is considered patentable.

RESPONSE TO REJECTION OF CLAIMS 1 - 5, 12 AND 13

Claims 1 - 5, 12, and 13 were rejected on grounds of obviousness, based on Hoffman and Sandifer.

No Logical Teaching Given for Combining References

As to claims 1 and 12, no teaching has been given for combining the references. The rationale given (Office Action, page 5) asserts that

-- Sandifer teaches generation of digital documents

and

-- Hoffman teaches generating MACs for digital documents.

Thus, the Office Action concludes, Hoffman's MACs should be applied to Sandifer.

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However, that conclusion is not supported by logic. One reason is that Hoffman faces a completely different situation than does Sandifer.

Hoffman generates the MACs to prevent third parties from viewing the content of his messages. Such viewing is possible because Hoffman uses a public-access network, namely, the Internet. That situation does not exist in Sandifer. Sandifer's documents are not exposed to the public. Thus, Hoffman's MACs are irrelevant to Sandifer.

Applicant's Disclosure is Used as Teaching

The Office Action, page 5, bottom, asserts that Hoffman's MACs should be generated for the aircraft-related documents of Sandifer, to verify authenticity of the aircraft-related documents. However, that is Applicant's own teaching. Applicant's teaching cannot be used as a rationale for combining references.

MPEP § 706.02(j) states:

Contents of a 35 U.S.C. 103 Rejection

. . . .

To establish a prima facie case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine

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reference teachings.

. . .

The teaching or suggestion to make the claimed combination . . . must . . . be found in the prior art and not based on applicant's disclosure.

The use of an MAC to verify that a digital document corresponds to a paper maintenance record has not been shown in the applied references. That is Applicant's teaching, and cannot be used as a reason for combining references. (See, eg, Specification, paragraphs [0009] and [0015].)

Claims 2 and 3

Point 1

Claim 2 states that the MAC derived from the paper maintenance record is encrypted. One result of this encryption is that only persons holding a key for de-crypting this encrypted MAC can validate a digital copy of the maintenance records. (See Specification, paragraph [0049].)

That motivation has not been shown in Hoffman. While it is correct that the PTO can show a different motive, to combine references, no valid different motive has been presented. Thus, Applicant submits that the rejection of claim 2 cannot stand.

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Point 2

The Office Action states that Hoffman's Figure 2 shows encrypting a MAC. However, the only references in that Figure to a MAC are "Validate MAC" and "Generate MAC," near the block GM 6. Encrypting a MAC does not appear to be present in Hoffman's Figure 2.

Further, the undersigned attorney downloaded a copy of Hoffman from the PTO's database, and performed a word search for the word "encrypt." None of the results indicated that a MAC is encrypted in Hoffman. This supports the previous conclusion that encrypting a MAC does not appear to be present in Hoffman.

This applies to claim 3.

Point 3

In addition, claim 3 recites storing the cypher text of the encrypted MAC. That has not been shown in Hoffman.

Claim 4

The Office Action does not allege that the subject matter of claim 4 is present in the applied references. MPEP § 2143.03 states:

To establish prima facie obviousness . . . **all the claim limitations** must be taught or suggested by the prior art.

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Applicant submits that the rejection cannot stand, since claim 4 has not actually been rejected.

Claim 5

Claim 5 recites:

5. Method according to claim 4, and further comprising:

h) recovering the MAC from the cyphertext;
and

i) ascertaining validity of the digital document, using the MAC.

Point 1

Even if the references are combined, claim 5(i) is not found.

The undersigned attorney finds Hoffman to be very confusing. However, it appears that Hoffman derives biometric data (as by taking a fingerprint) from a person using a terminal such as an ATM. Hoffman may encrypt that biometric data for transmission, and Hoffman derives a MAC from the biometric data, whether encrypted or not. Hoffman transmits the biometric data.

When the biometric data arrives at a central computer, Hoffman uses the MAC to determine whether the biometric data has been corrupted. Hoffman then compares the biometric data with stored biometric data, to ascertain whether the customer is authentic or

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an imposter.

But that transmitted biometric data does not correspond to the claimed "digital document." The claimed "digital document" is "stored" by virtue of claim 3. The PTO has not shown that Hoffman uses a MAC on the **stored** biometric data (as opposed to the biometric data which is obtained at the ATM and then transmitted).

Point 2

The Office Action previously asserted that the claimed "document" is found in the aircraft maintenance records of Sandifer. The Office Action then purports to find claim 5 in Hoffman.

But, as explained above, the Office Action has not shown a teaching in the references suggesting that a MAC be developed for Sandifer's digitized records. Hoffman develops a MAC because he has a security problem, but no such problem has been identified in Sandifer.

Nor has the Office Action set forth a teaching why the MAC should be encrypted. If it is not encrypted, then the de-cryption of claim 5 would not be needed.

In addition, the Office Action has not set forth a teaching for "validating" Sandifer's "digital document." Hoffman may have a need for validating his data, but that need does not exist in Sandifer.

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Claims 12 and 13

The preceding applies to claims 12 and 13.

References are Non-Analogous

Hoffman is concerned with using biometric data (fingerprint, retinal scan, etc.) to identify a customer at an ATM. He obtains the biometric data from the customer at the ATM, and transmits it to a remote location, where it is compared with stored biometric data of the same customer.

However, the biometric data is encrypted prior to transmission, to prevent eavesdropping. The reason is that, plainly, if the biometric data is intercepted, then a thief can gain access to the customer's account.

Sandifer shows computerizing of aircraft maintenance records.

Plainly, if a third party obtains access to the maintenance records, the third party cannot gain access to any monetary account, as in Hoffman. And the PTO has shown no reason why Sandifer should be concerned with a third party's gaining access to the maintenance records.

While it is true that common sense would indicate that Sandifer's maintenance records should not be modified without authorization, the PTO has not shown how encryption, or use of an MAC, would prevent that modification. Nor has the PTO shown where

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such modification-prevention of Sandifer's records is taught in Hoffman.

MPEP § 2141.01(a) recites:

TO RELY ON A REFERENCE UNDER 35 U.S.C. 103, IT
MUST BE ANALOGOUS PRIOR ART

In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned.

Applicant submits that Hoffman is non-analogous art.

Lack of Teaching Generally

The Office Action, page 5, bottom, asserts that using Hoffman's approach in Sandifer will allow verification of authenticity of the document.

However, the PTO has not shown why Sandifer would be concerned with such verification.

Further, in the previous paper-based system which Sandifer attempts to computerize, Sandifer discusses no concern with verification of the authenticity of documents. Given that, why would Sandifer then be concerned with verification in the new computerized system ?

Thus, the PTO's rationale for combining the references seeks a goal to which Sandifer himself is apparently indifferent. Thus,

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the PTO is changing the mode of operation of the references.

MPEP § 2143.01 prohibits this:

THE PROPOSED MODIFICATION CANNOT RENDER THE
PRIOR ART UNSATISFACTORY FOR ITS INTENDED
PURPOSE.

THE PROPOSED MODIFICATION CANNOT CHANGE THE
PRINCIPLE OF OPERATION OF A REFERENCE.

No Expectation of Success Shown

MPEP § 706.02(j) recites:

Contents of a 35 U.S.C. 103 Rejection

. . . .

To establish a prima facie case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

Second, there must be a reasonable expectation of success.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success **must both be found in the prior art and not based on applicant's disclosure.**

The PTO has not shown an expectation of success, for at least

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the reason that the PTO has not explained **exactly what is obtained** when the references are combined.

For example, are maintenance personnel in Sandifer now required to de-crypt a MAC, and then use the MAC to authenticate digitized maintenance documents every time they need the digitized documents ?

If the personnel use the original paper documents in Sandifer, are the personnel still required to use the MAC ? If so, how is the MAC used, given that the documents are **paper** ?

Or is the verification done **once**, at the time the documents are digitized ? If so, where is the teaching ?

Or is it done periodically, on a sampling basis, to assure quality control ? If so, where is the teaching ?

Until these questions are answered, Applicant submits that no expectation of success has been shown. The PTO has merely combined the references, in pursuit of a combination which meets Applicant's claims.

But the PTO has not explained exactly what is obtained from the combination. Thus, it cannot be determined how the combination works.

RESPONSE TO REJECTION OF CLAIMS 14 - 17

Claim 14 - 17 were rejected as obvious, based on Hoffman, Sandifer, and Carlson.

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Claim 14(d) recites generating MACs for the digital records. No teaching has been given for applying the MAC of Hoffman to the digital maintenance records of Sandifer.

Claim 15 recites verifying authenticity of maintenance records. As explained above, the PTO has not shown an expectation of success in combining the references. The PTO has not explained when, and how often, the verification is undertaken.

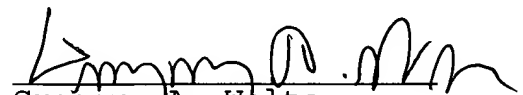
Claim 16 is deemed patentable, based on its parent.

CONCLUSION

Applicant requests that the rejections to the claims be reconsidered and withdrawn.

Applicant expresses thanks to the Examiner for the careful consideration given to this case.

Respectfully submitted,



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